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Preliminary Investigation of the Role of Open Bigrams in Word Perception: Is There a Benefit to Having Flankers That Consist of Letters in the Word?

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Abstract

Most investigators of word identification agree that information is processed through a hierarchical system in which units at progressively higher levels respond to features, letters, letter combinations (e.g., pairs, or bigrams), and possibly words. Grainger et al. (2014) found support for the role of adjacent-letter bigrams in an experiment in which participants saw target strings flanked by bigrams, such as BI BIRD RD and CE BIVS NT, and judged whether the targets were words. They found, for words, that flanking bigrams facilitated performance when the flanking bigrams contained letters from the target, and that the order of bigrams relative to the word did not affect performance (e.g., performance did not differ for BI BIRD RD and RD BIRD BI). We replicated Grainger et al's procedure. Consistent with their findings, we found, for words, better performance when flankers contained letters from the target than when they did not. However, we did not replicate Grainger et al.'s crucial finding of better performance when flanking bigrams' letter order matched the target's order of letters (e.g., BI BIRD RD and RD BIRD BI) than when the bigrams letter order flipped (e.g., IB BIRD DR and DR BIRD IB).